

WE CLAIM:

1. A method for predicting the PFA value of a sunscreen composition comprising the steps of:
  - 5 determining *in vivo* SPF;
  - determining *in vitro* SPF based on an absorbance spectrum in a UV region for said sunscreen composition; and
  - calculating the PFA-PPD *in vitro* based on an integration area of a UVA1 region
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2. The method of claim 1, further comprising, after the step of determining *in vitro* SPF, the step of normalizing said absorbance spectrum.
- 15 3. The method of claim 1, wherein said step of determining *in vitro* SPF is conducted on a substrate selected from the group consisting of surgical tape, polyvinyl chloride film, and synthetic skin substitute material.
4. The method of claim 1, wherein said step of determining *in vitro* SPF  
20 is conducted on a substrate formed of a synthetic skin substitute material.
5. The method of claim 1, wherein said step of determining *in vitro* SPF comprises a sunscreen composition applied to a substrate in an application dose of 2 mg/cm<sup>2</sup>.

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6. The method of claim 3, wherein said step of determining *in vitro* SPF comprises a sunscreen composition applied to said substrate in an application dose of 2 mg/cm<sup>2</sup>.

5 7. The method of claim 4, wherein said step of determining *in vitro* SPF comprises a sunscreen composition applied to said substrate in an application dose of 2 mg/cm<sup>2</sup>.